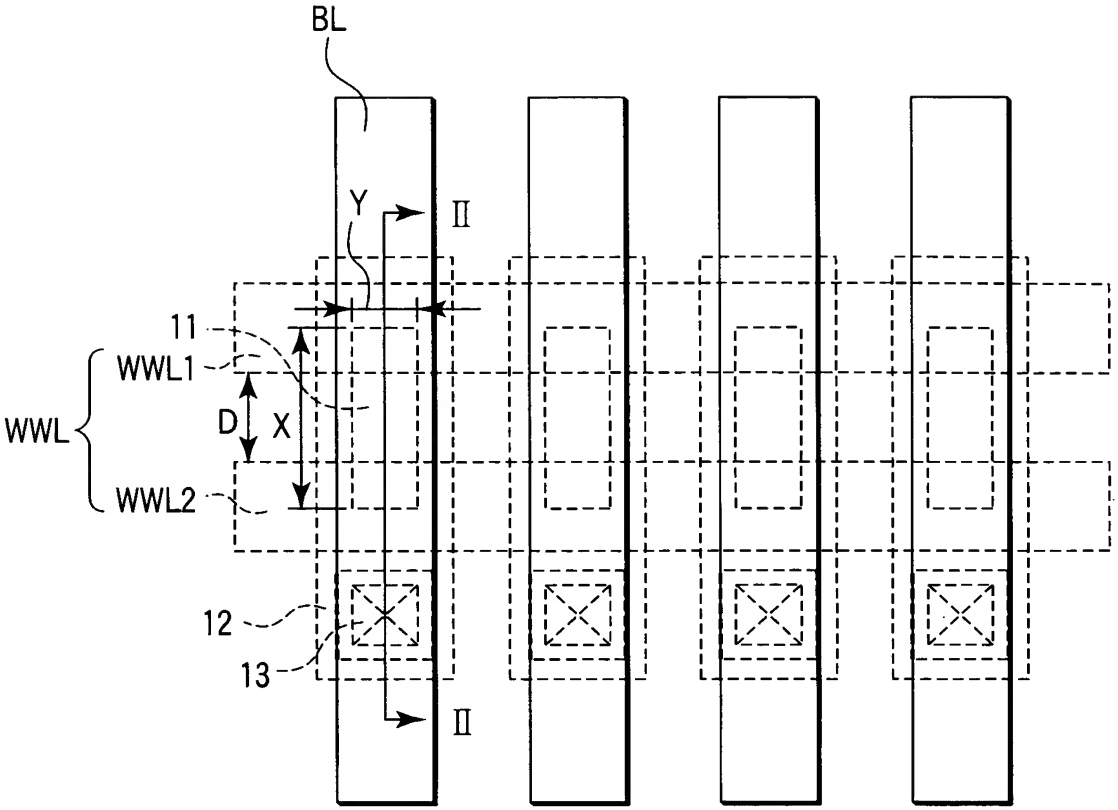

FIG. 1

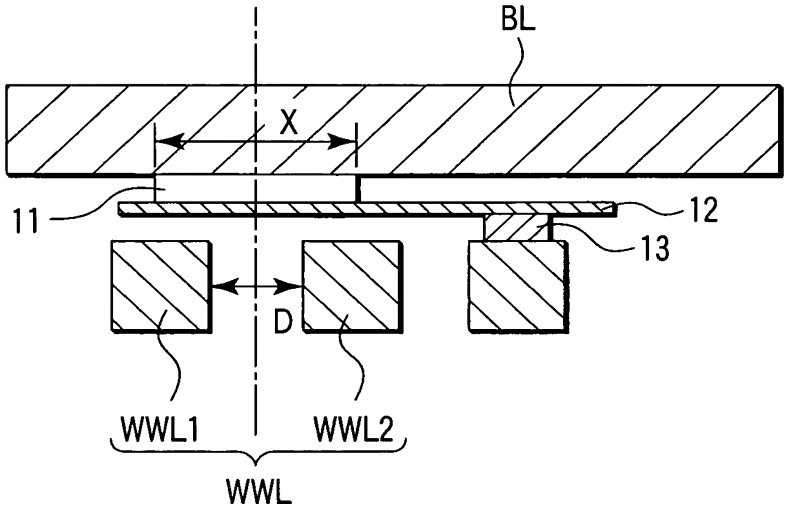

FIG. 2

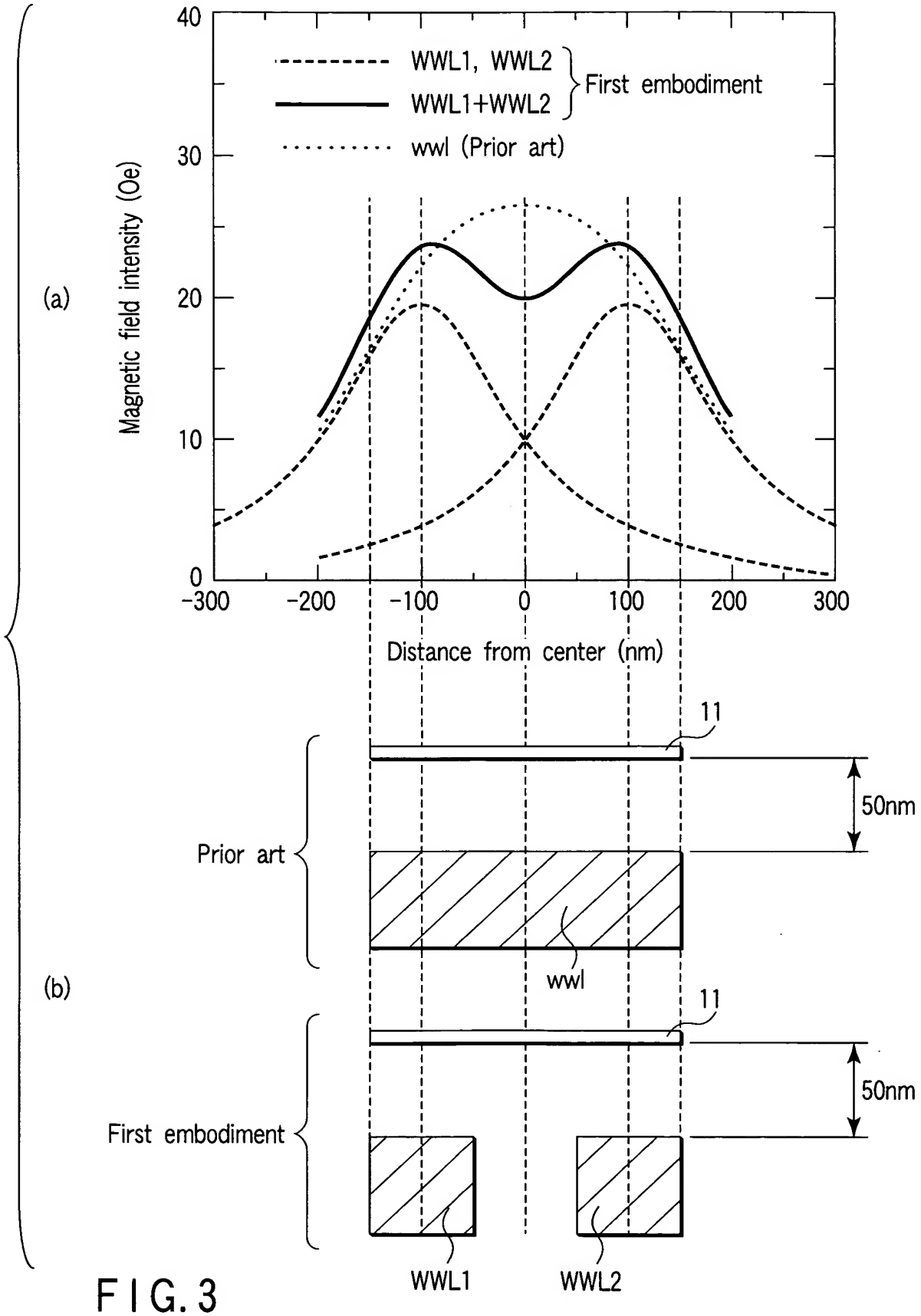
(a)
Magnetic field intensity (Oe)
40
30
20
10
0
WWL1, WWL2
WWL1+WWL2
First embodiment
wwl (Prior art)
-300
-200
-100
0
100
200
300
Distance from center (nm)
(b)
Prior art
11
50nm
wwl
First embodiment
11
50nm
WWL1
WWL2

FIG. 3

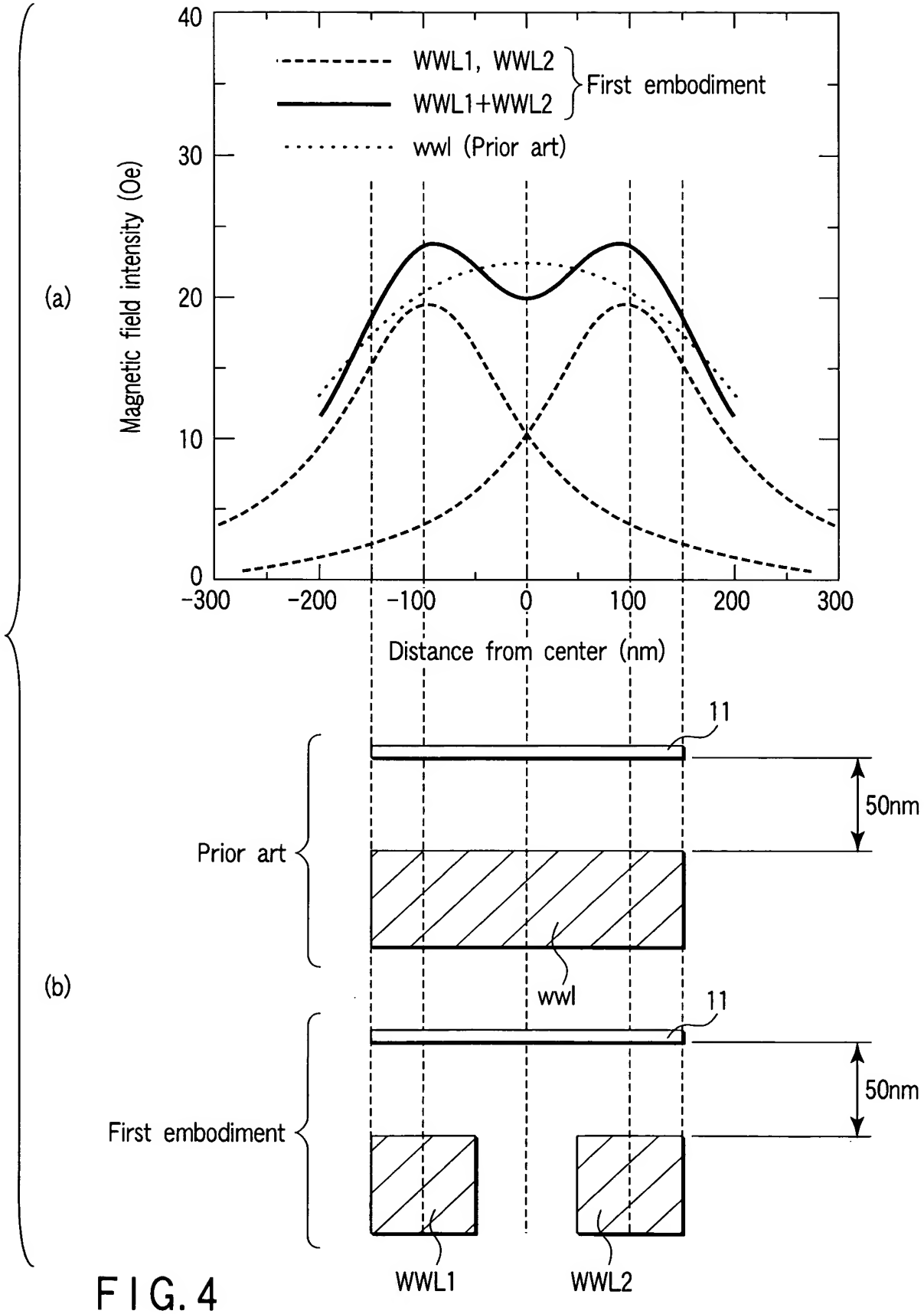
(a)
Magnetic field intensity (Oe)
40
30
20
10
0
WWL1, WWL2
WWL1+WWL2
First embodiment
wwl (Prior art)
-300
-200
-100
0
100
200
300
Distance from center (nm)
(b)
Prior art
11
50nm
wwl
First embodiment
11
50nm
WWL1
WWL2

FIG. 4

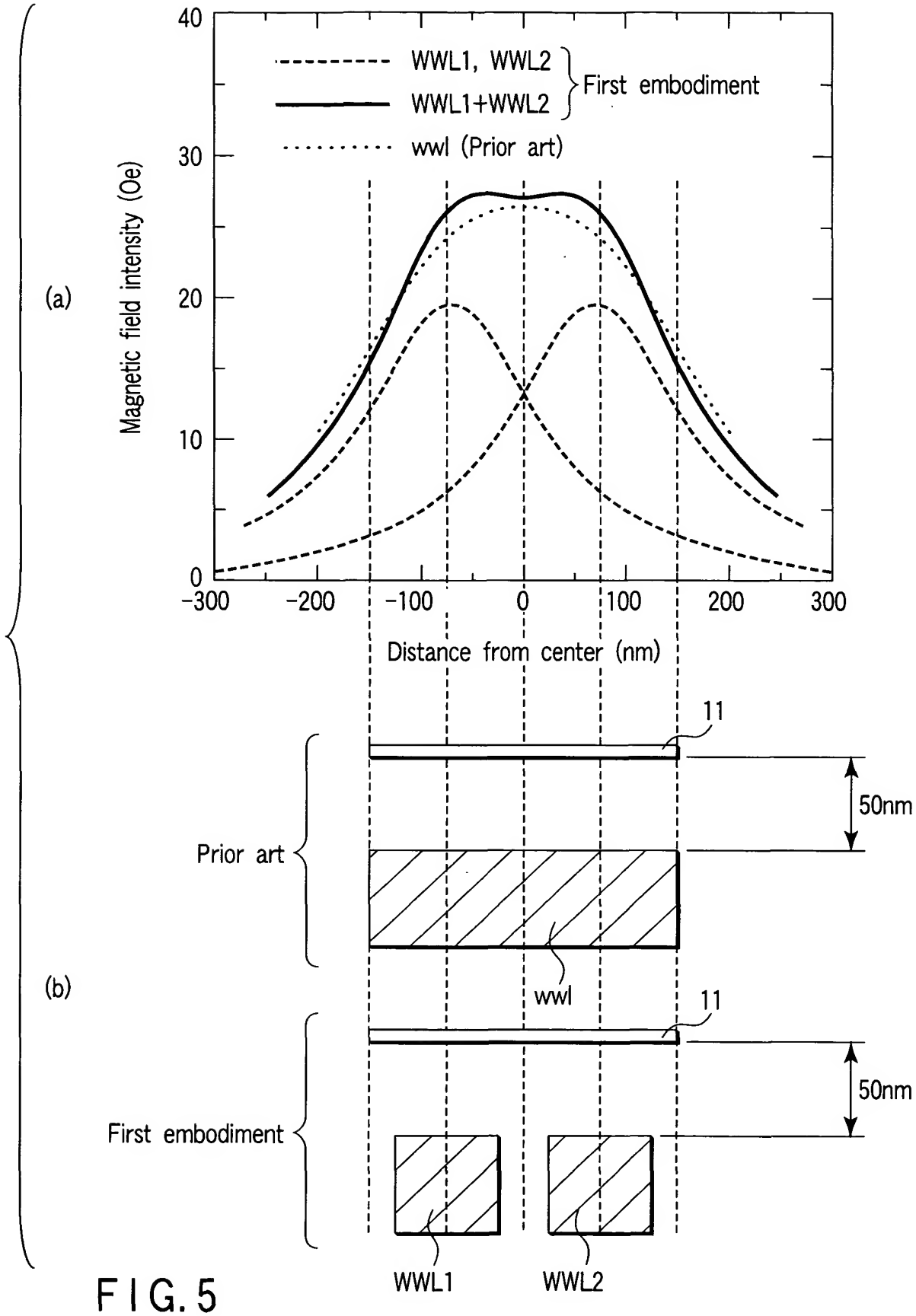
(a)
Magnetic field intensity (Oe)
40
30
20
10
0
WWL1, WWL2
WWL1+WWL2
First embodiment
wwl (Prior art)
-300
-200
-100
0
100
200
300
Distance from center (nm)
(b)
Prior art
11
50nm
wwl
First embodiment
11
50nm
WWL1
WWL2

FIG. 5

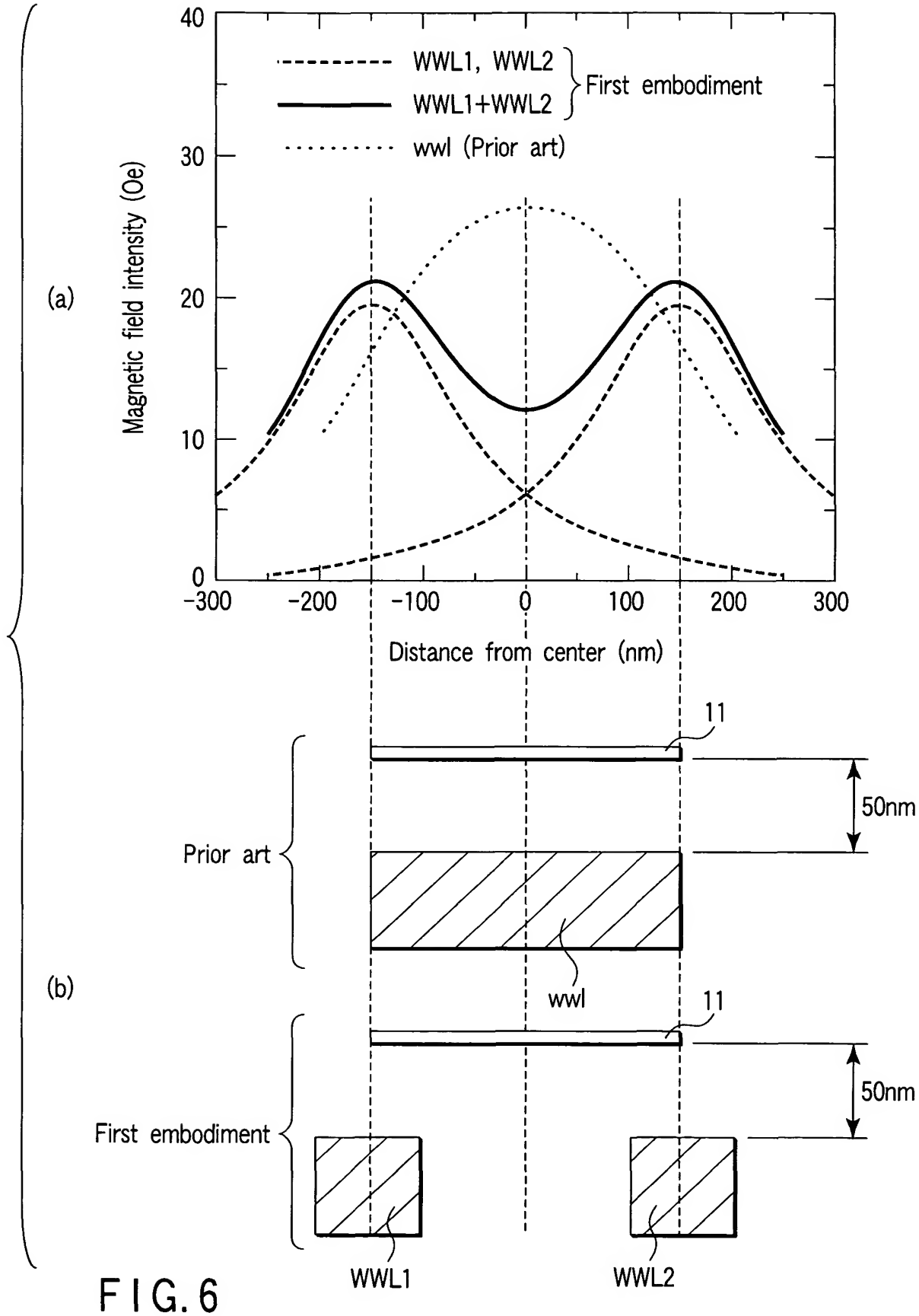
(a)
Magnetic field intensity (Oe)
40
30
20
10
0
WWL1, WWL2
WWL1+WWL2
First embodiment
wwl (Prior art)
-300
-200
-100
0
100
200
300
Distance from center (nm)
(b)
11
50nm
Prior art
wwl
11
50nm
First embodiment
WWL1
WWL2

FIG. 6

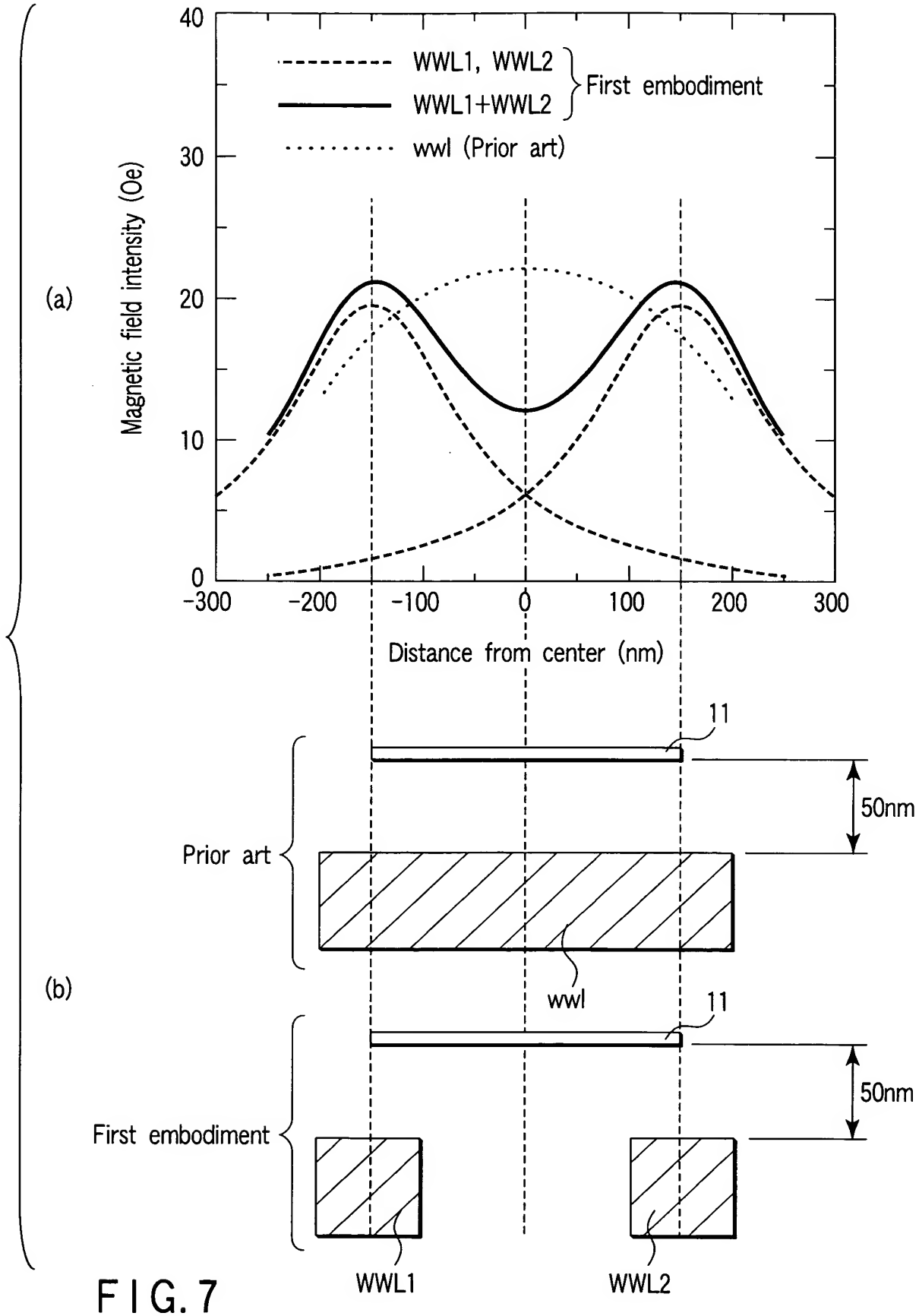
(a)
Magnetic field intensity (Oe)
40
30
20
10
0
WWL1, WWL2
WWL1+WWL2
First embodiment
wwl (Prior art)
-300
-200
-100
0
100
200
300
Distance from center (nm)
(b)
Prior art
11
50nm
wwl
First embodiment
11
50nm
WWL1
WWL2

FIG. 7

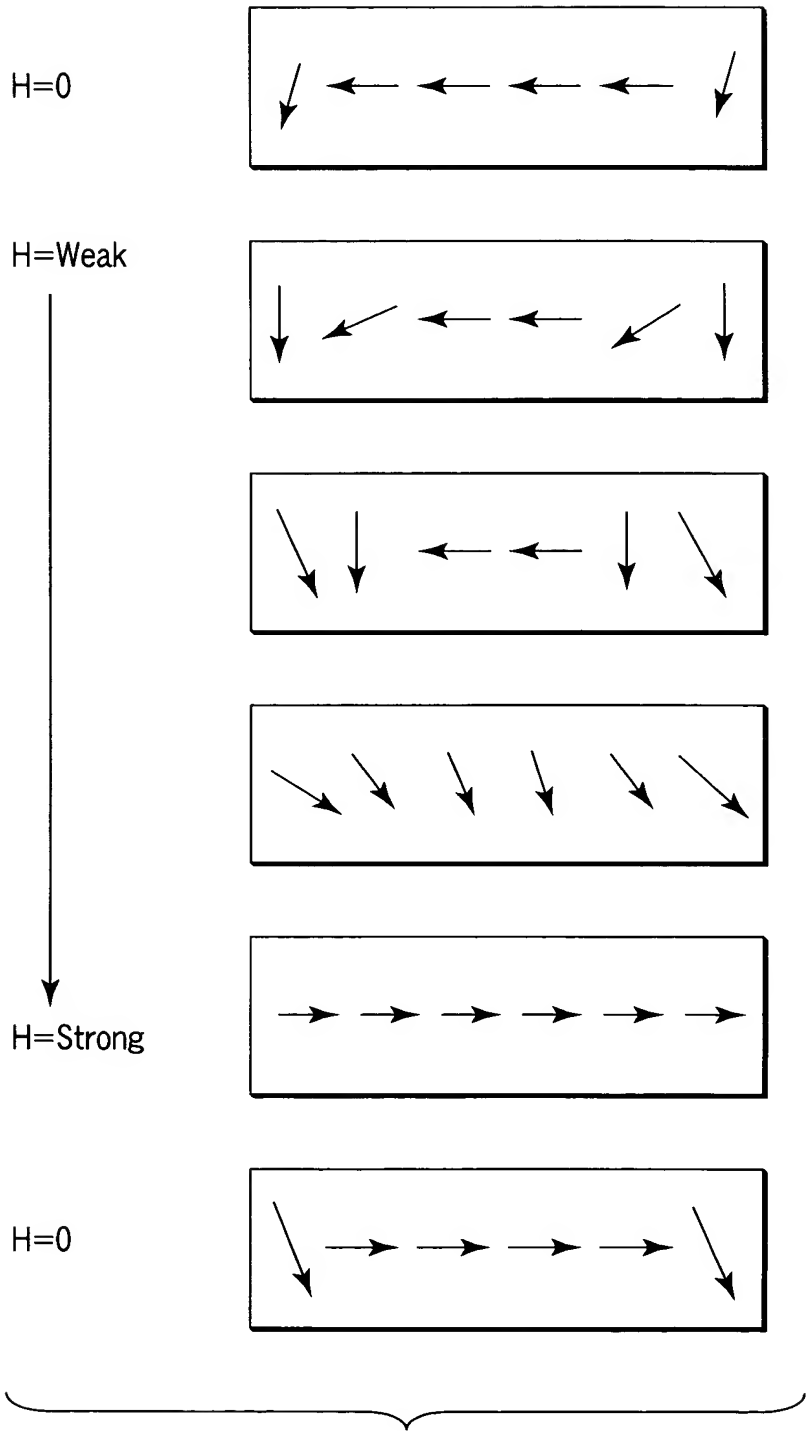

FIG. 8

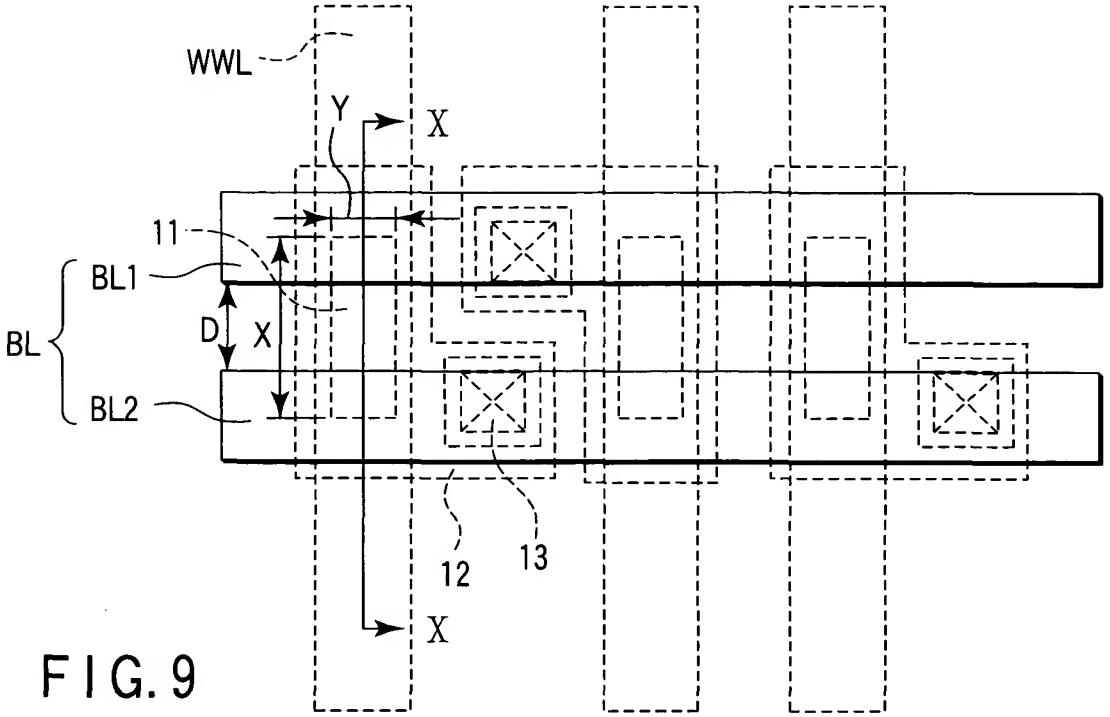

FIG. 9

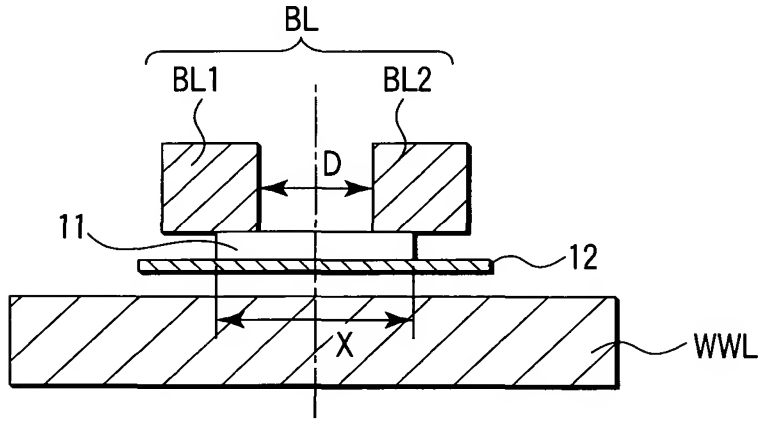

FIG. 10

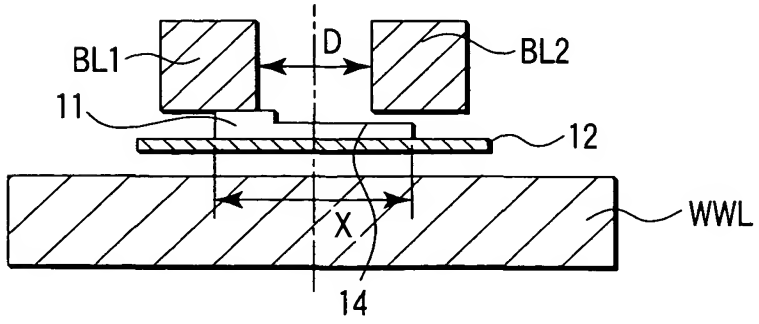

FIG. 11

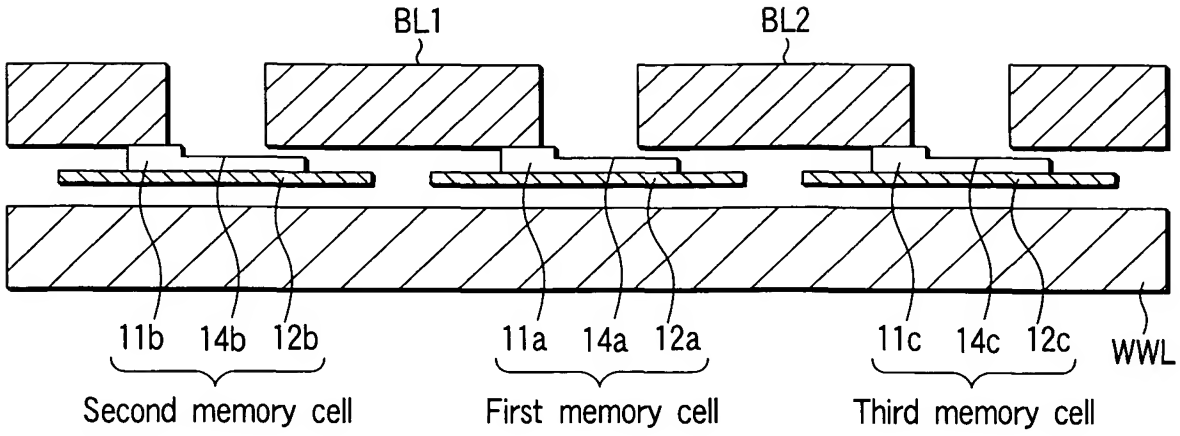

FIG. 12

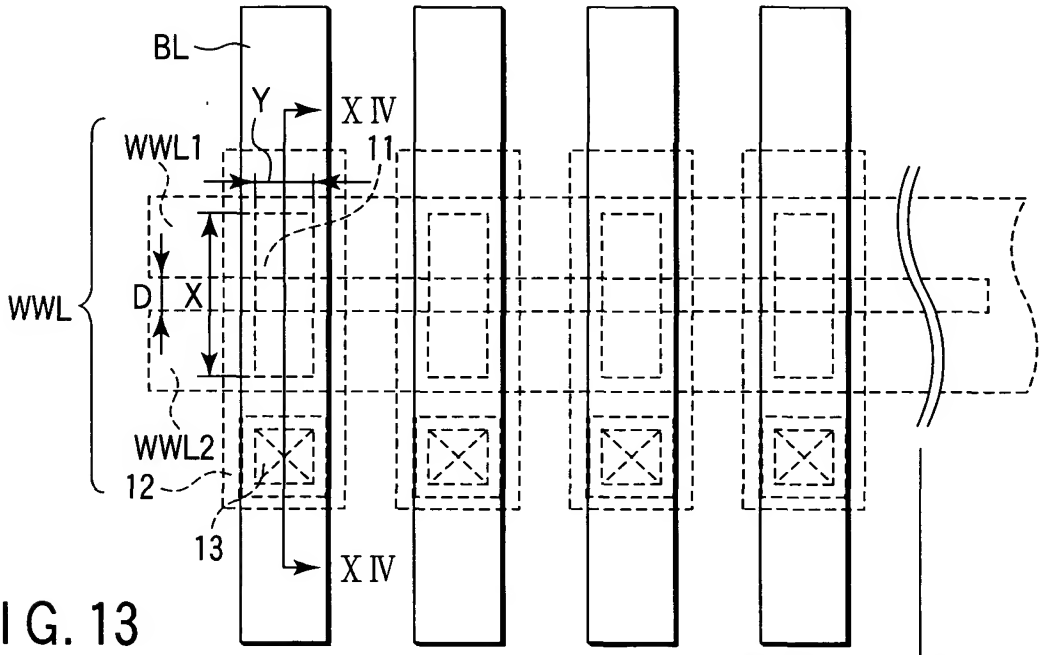

FIG. 13

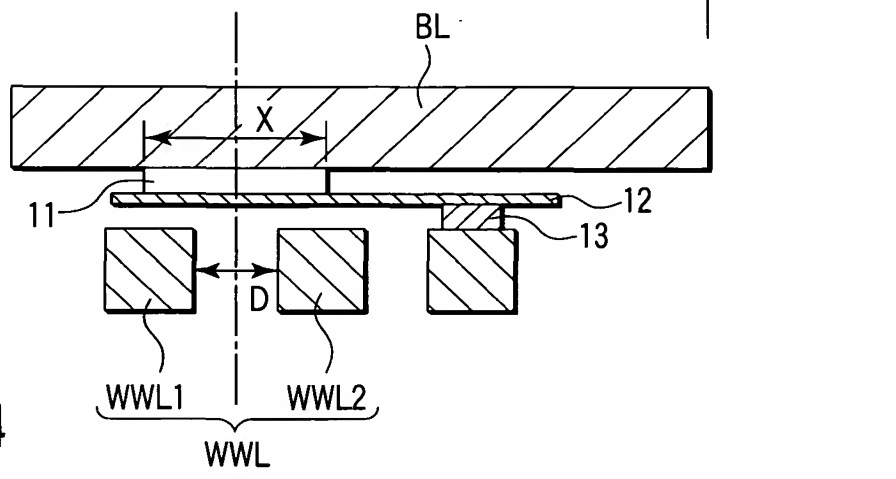

FIG. 14

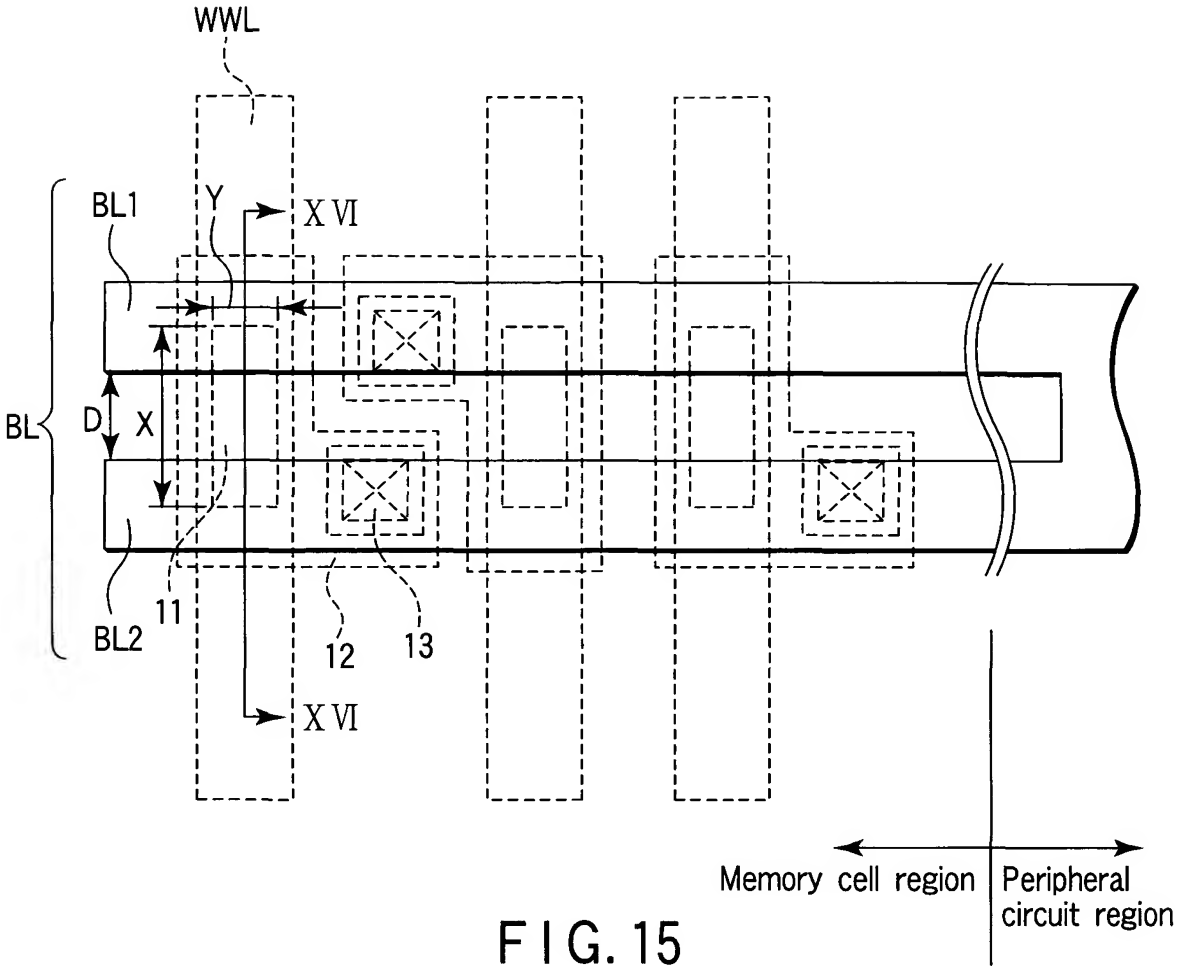
WWL
BL1
Y
XVI
BL
D
X
BL2
11
12
13
XVI
Memory cell region
Peripheral circuit region

FIG. 15

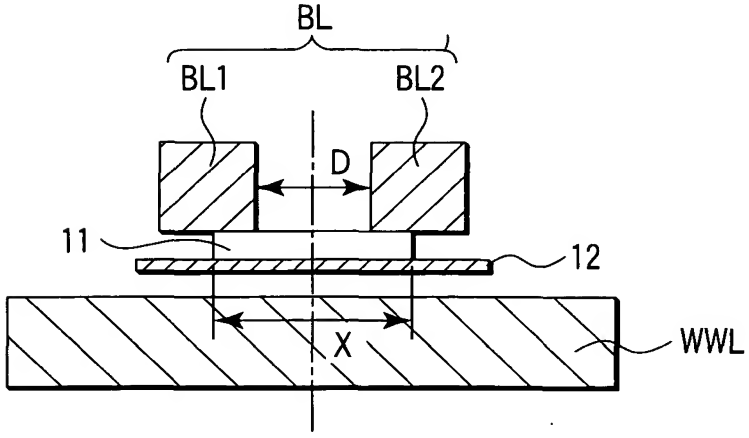
BL
BL1
BL2
D
11
12
X
WWL

FIG. 16

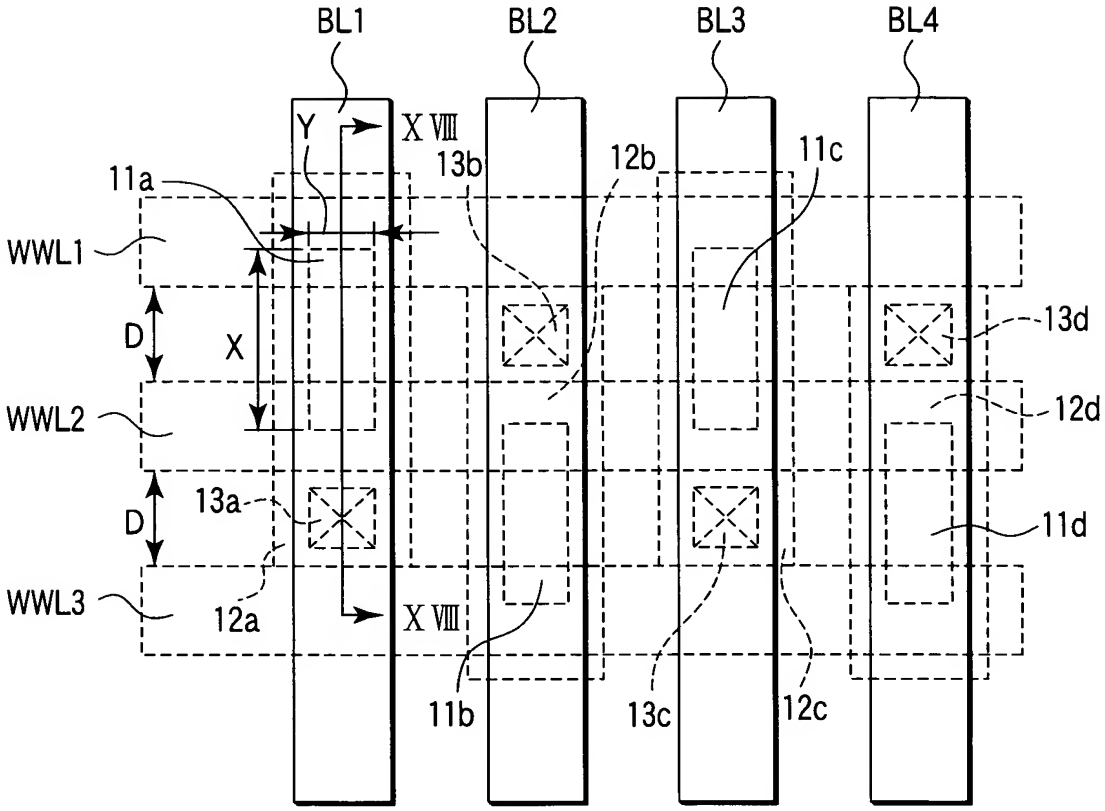
BL1
BL2
BL3
BL4
Y
X Ⅷ
11a
13b
12b
11c
WWL1
D
X
13d
WWL2
12d
D
13a
11d
WWL3
12a
X Ⅷ
11b
13c
12c

FIG. 17

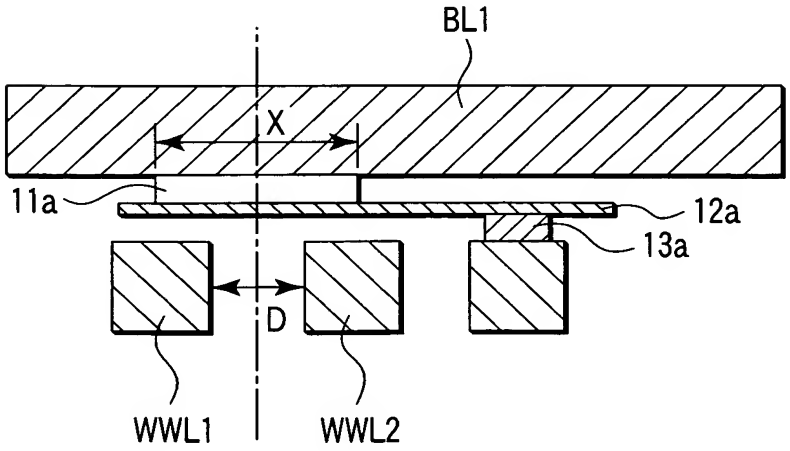
BL1
X
11a
12a
13a
D
WWL1
WWL2

FIG. 18

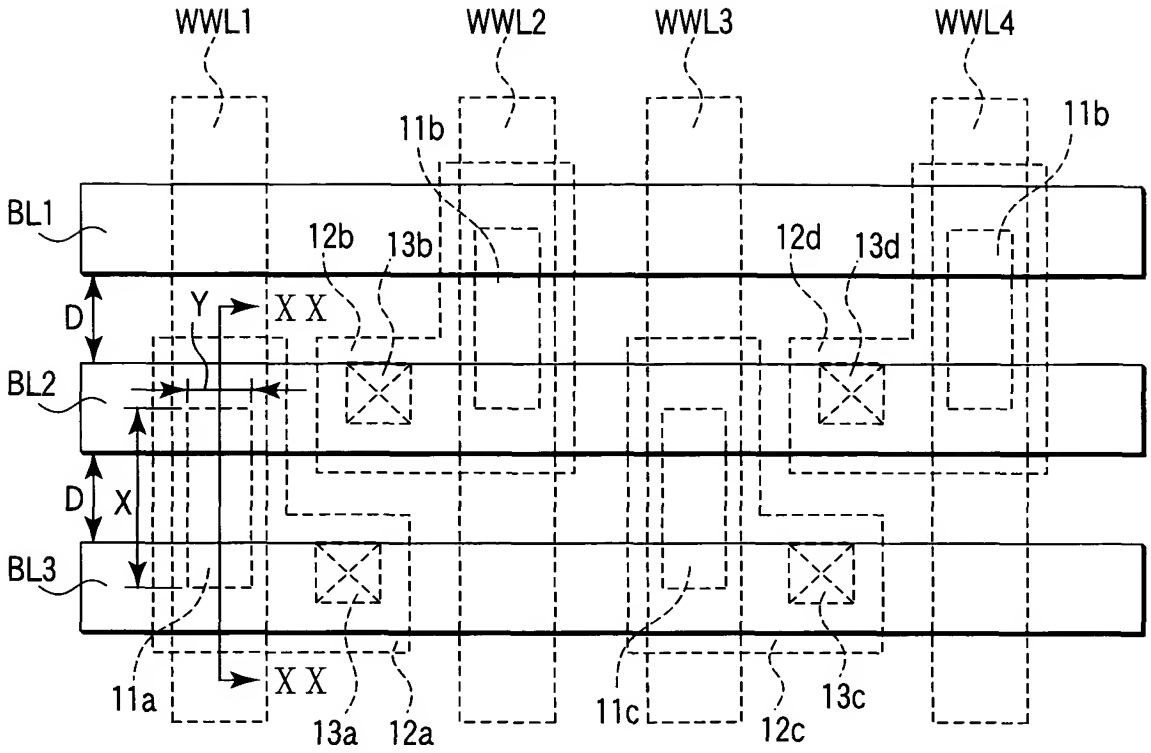
WWL1
WWL2
WWL3
WWL4
11b
11b
BL1
12b
13b
12d
13d
D
Y
X X
BL2
D
X
BL3
11a
X X
13a
12a
11c
12c
13c

FIG. 19

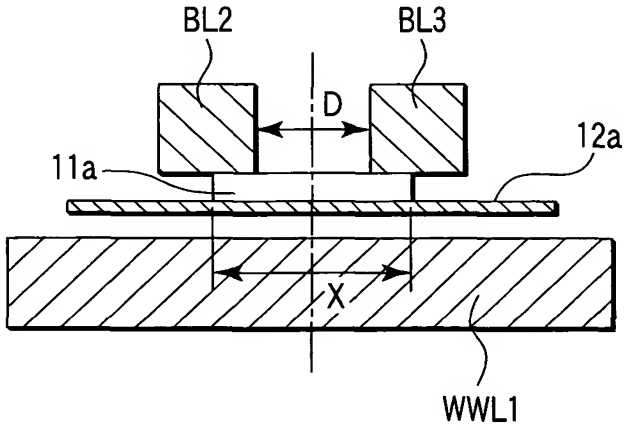
BL2
BL3
D
12a
11a
X
WWL1

FIG. 20

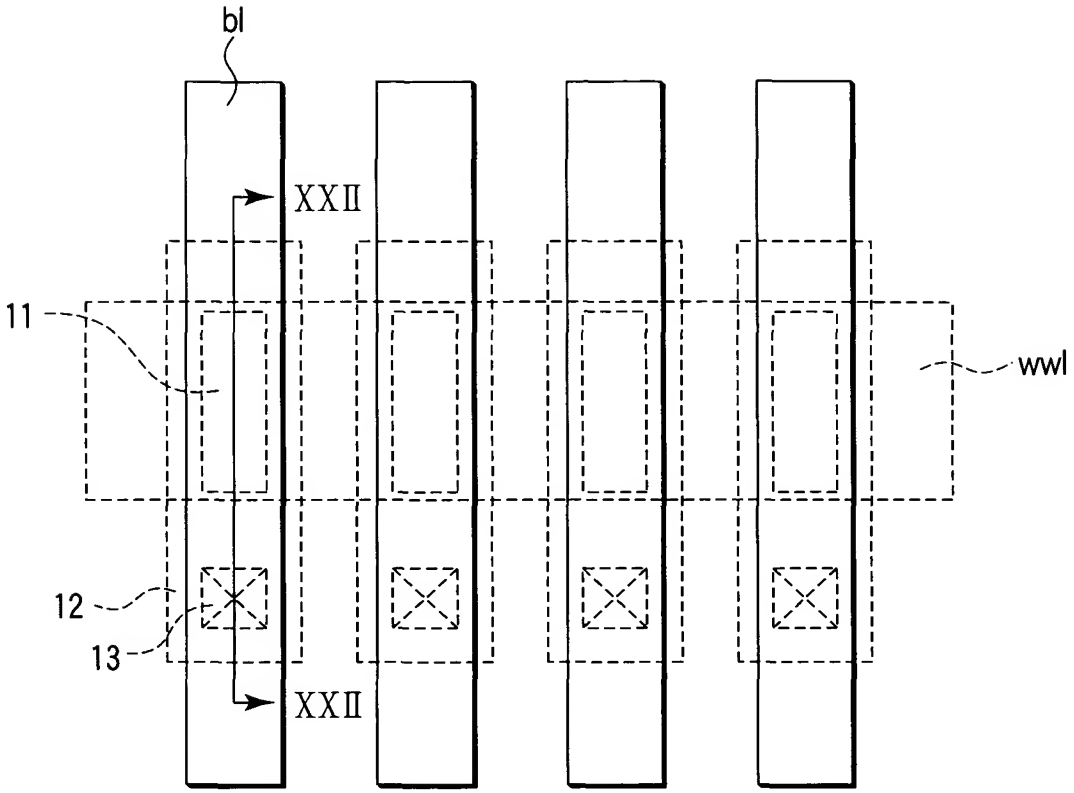

FIG. 21 PRIOR ART

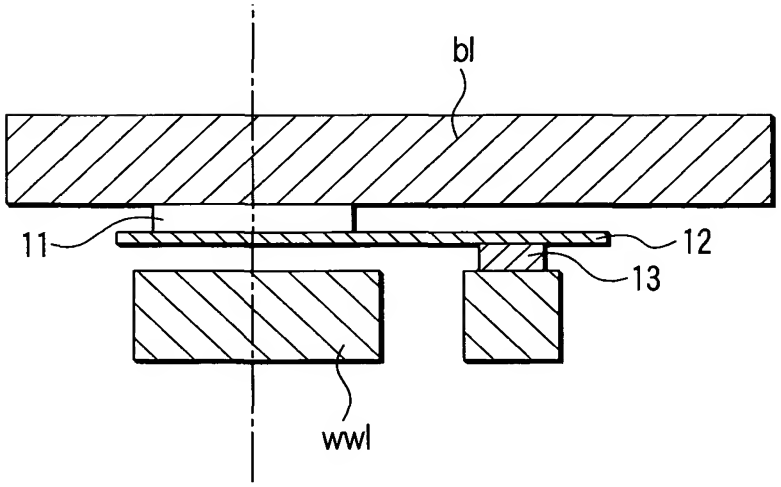

FIG. 22 PRIOR ART